

R.B. Johnson

# SOUTHERN PACIFIC COMPANY

(PACIFIC LINES).

## TIME TABLE

FOR THE

### TUCSON DIVISION

# 116



Effective Sunday, July 8, 1945, at 12:01 A. M.

MOUNTAIN STANDARD TIME

For the government and information of employes only.

J. W. CORBETT,  
*General Manager.*

R. E. HALLAWELL,  
H. R. HUGHES,  
*Assistant General Managers.*

G. C. BAKER,  
*General Superintendent of Transportation.*

C. H. GRANT,  
*Superintendent of Transportation.*

G. A. BAYS,  
*Superintendent.*

### WELLTON SUBDIVISION

#### EASTWARD

#### WESTWARD

Capacity of sidings in car lengths	EASTWARD										Distance from San Francisco	WESTWARD										
	SECOND CLASS				FIRST CLASS							Distance from Phoenix Yard	FIRST CLASS									
	846	902	844	842	2	372	6	4	370	44			5	43	371	1	373	3				
											Time Table No. 116											
											July 8, 1945											
											STATIONS											
											TO-R YUMA	174.2										
											TO-R EAST YARD	169.5										
											TO-R ARABY	166.9										
											TO-R FORTUNA	163.3										
											TO BLAISDELL	160.4										
											TO KINTER	156.4										
											TO DOME	153.5										
											TO WELLTON	137.0										
											TO MING	131.3										
											TO ROLL	126.1										
											TO GROWLER	113.8										
											TO KOFA	104.5										
											TO HORN	94.3										
											TO HYDER	84.7										
											TO MONTEZUMA	75.9										
											TO SADDLE	65.9										
											TO GILLESPIE	66.0										
											TO ARLINGTON	45.7										
											TO DIXIE	41.3										
											TO CONGER	35.5										
											TO BUCKEYE	31.3										
											TO LIBERTY	25.3										
											TO LITCHFIELD	17.3										
											TO CASHION	14.0										
											TO FOWLER	8.9										
											TO 23rd AVE. PHOENIX	3.0										
											TO CROSSING-AT&SF WYE	1.5										
											TO-R PHOENIX	1.0										
											TO-R PHOENIX YARD	0.0										
											(174.2)											
											Time over District											
											Average Speed per Hour											
											(1.15)	35.97	(4.30)	38.49	(4.15)	40.75	(4.45)	36.46	(4.15)	40.75	(4.05)	42.66

See page 3 for additional schedules between Phoenix and Phoenix Yard.

RULE 5. Schedule time and train orders for eastward trains at East Yard will apply at end of double track.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Granite Spur . . . (Spur)	755.2	19
Ligurta . . . . . "	760.2	10
Tyson . . . . . "	788.3	31
Harqua . . . . . "	849.4	4
Crag . . . . . "	856.0	39
Hassayampa . . . . . "	867.6	12
Palo Verde . . . . . "	870.2	10
Norton . . . . . "	884.9	..
Tolleson . . . . . "	895.7	..
Campo . . . . . "	902.0	..

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS				
Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
44	Buckeye, Litchfield	Receive	Phoenix	(Colton or San Diego)
4	Buckeye, Litchfield	Receive	East of El Paso	

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS				
Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
3	Litchfield, Buckeye, Hyder	Rec., Dis. Rev.	San Diego or Colton	El Paso
1	Tolleson	Rec., Dis. Rev.	Any Station	Any Station

PICACHO SUBDIVISION

EASTWARD

WESTWARD

Main railway schedule table containing train numbers (904-988), classes (Second Class, First Class), departure/arrival times, and station names (Phoenix, Tempe, Mesa, etc.).

ADDITIONAL STATIONS table with columns for NAME, Mile Post, and Capacity, listing stations like Tovrea, Tremaine, Palfa, etc.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS table detailing stops for various train numbers (44, 6) at locations like Red Rock, Naviska.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS table detailing stops for various train numbers (3, 5, 43) at locations like Naviska, Cortaro, Rillito.

RULE 5. Schedule time and train orders for westward trains at Stockham will apply at end of double track.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except: No. 44 and No. 2 are superior to No. 5.

Second main track between east end Phoenix Yard and east switch Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

See page 2 for additional schedules between Phoenix Yard and Phoenix.

WELLTON SUBDIVISION

Capacity of Sidings in car lengths	EASTWARD						Distance from San Francisco	Time Table No. 116		Distance from Gila	WESTWARD					
	SECOND CLASS			FIRST CLASS				July 8, 1945			FIRST CLASS					
		846 Freight	844 Freight	842 Freight				6 Argonaut			5 Argonaut					
	Leave Daily	Leave Daily	Leave Daily			Leave Daily		Arrive Daily								
68 WIP		6.05 PM	9.35 AM	2.30 AM			5.35 AM	770.0	TO WELLTON	85.7	f	1.40 AM				
69 P		6.13	9.43	2.38			5.42	778.1	E. 3.4 - W. 3.4	82.6		1.34				
63 P		6.19	9.49	2.44			5.47	776.4	ASHER	79.8		1.30				
69 P		6.25	9.56	2.50			f 5.52	780.1	E. 3.3 - W. 3.3	75.6	f	1.26				
63 P		6.31	10.02	2.56			5.57	788.8	TACNA	71.9		1.21				
67 P		6.39	10.10	3.04			6.04	788.6	E. 3.6 - W. 3.7	67.1		1.16				
W79 E67 P		6.50	10.20	3.15			f 6.12	792.6	GAEL	63.1	f	1.12				
63 P		6.56	10.26	3.21			6.17	795.9	E. 4.0 - W. 3.9	59.8		1.04				
64 P		7.04	10.34	3.29			6.23	800.5	COLFRED	55.2		12.58				
94 P		7.14	10.44	3.39			f 6.30	806.2	E. 4.5 - W. 4.6	49.5	f	12.51				
W127 E63 WP		7.24	10.54	3.49			f 6.39	811.9	PEMBROKE	43.8	f	12.42				
94 P		7.30	11.00	3.55			6.44	815.8	E. 4.1 - W. 4.2	39.9		12.36				
63 P		7.37	11.07	4.02			6.49	819.7	MOHAWK	36.0		12.31				
68 P		7.41	11.11	4.06			6.52	822.0	E. 3.4 - W. 3.2	33.7		12.28				
W76 E72 WOP		8.05	11.35	4.30			s 7.05	826.1	KIM	29.6	s	12.14				
76 P		8.15	11.45	4.40			7.11	829.6	E. 4.4 - W. 4.6	26.1		12.09				
61 P		8.22	11.52 AM	4.47			7.16	833.1	STOVAL	22.6		12.04 AM				
65 P		8.33	12.03 PM	4.58			7.26	839.9	E. 5.7 - W. 6.0	15.8		11.54 PM				
64 P		8.42	12.12	5.07			7.34	845.5	DATLAND	10.2		11.46				
63 P		8.50	12.20	5.15			7.41	850.3	E. 5.7 - W. 5.4	5.4		11.39				
Yard Limits BKWOTYP		9.00 PM	12.30 PM	5.25 AM			s 7.50 AM	855.7	TO SENTINEL	0.0		11.30 PM				
		Arrive Daily	Arrive Daily	Arrive Daily			Arrive Daily		E. 3.7 - W. 3.0			Leave Daily				
		(2.55) 29.38	(2.55) 29.38	(2.55) 29.38			(2.15) 38.09		TRIGO							
									E. 3.7 - W. 3.6							
									TARTRON							
									E. 6.9 - W. 6.9							
									TO PIEDRA							
									E. 5.4 - W. 5.4							
									THEBA							
									E. 4.7 - W. 4.7							
									SMURR							
									E. 5.8 - W. 5.1							
									TO-R GILA							
									(85.7)							
									Time over District			(2.10)				
									Average Speed per Hour			39.55				

WELLTON SUBDIVISION					
Capacity of Sidings in car lengths	EASTWARD	Distance from San Francisco	Time Table No. 116 July 8, 1945		WESTWARD
			Litchfield Branch	Litchfield Park	
			STATIONS		
74 YP		889.7	TO LITCHFIELD	5.0	
		894.7	LITCHFIELD PARK	0.0	
			(5.0)		

YUMA VALLEY RAILROAD					
Capacity of Sidings in Car Lengths	EASTWARD	Distance from Yuma	Time Table No. 116 July 8, 1945		WESTWARD
			Yuma Yard	Gadsden	
			STATIONS		
Yuma Yard P		0.0	TO-R YUMA	21.0	
20		1.0	U. S. R. S.	20.0	
23		8.5	WILLETTS	12.5	
25		15.0	SOMERTON	6.0	
		21.0	GADSDEN	0.0	
			(21.0)		

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Ludy ..... (Spur)	3.0	25
Spillway.....	10.2	8

**SPECIAL INSTRUCTIONS**

Southern Pacific Company Rules and Regulations of the Transportation Department, Air Brake Rules, and Special Instructions in Tucson Division Time Table govern on Yuma Valley Railroad.

Trains will not exceed speed 15 MPH except must not exceed 8 MPH over trestle at U.S.R.S.

Impaired side clearance at Spillway, MP 10.25.

At Yuma, normal position of junction switch will be for S.P. yard tracks.

**RULE 93:** Yard limits are established at Yuma.

U.S.R.S. yard, Yuma, and Ludy Spur must not be used.

Track out service and must not be used east of MP 16 (Somerton).

PICACHO SUBDIVISION

PICACHO SUBDIVISION

EASTWARD				Distance from San Francisco	Time Table No. 116 July 8, 1945	Distance from Picacho	WESTWARD	
SECOND CLASS			FIRST CLASS				FIRST CLASS	
856	854	852	6				5	
Freight	Freight	Freight	Argonaut	Argonaut				
Leave Daily	Leave Daily	Leave Daily	Leave Daily	Arrive Daily				
Yard Limits BKWOTYP	4.30 PM	8.20 AM	12.20 AM	8.00 AM	855.7	81.0	s 11.20 PM	
62 P	4.39	8.29	12.29	8.07	859.1	77.6	11.13	
74 P	4.55	8.45	12.45	8.18	865.1	71.6	11.05	
62 P	5.07	8.57	12.57	8.25	869.1	67.6	10.59	
78 P	5.17	9.07	1.07	8.30	871.8	64.9	10.55	
72 YP	5.30	9.20	1.20	f 8.36	874.6	62.1	f 10.51	
64 P	5.39	9.29	1.29	8.41	879.4	57.3	10.44	
68 P	5.47	9.37	1.37	f 8.46	883.7	53.0	f 10.38	
68 P	5.55	9.45	1.45	8.51	888.4	48.3	10.30	
68 P	6.03	9.53	1.53	8.56	892.8	43.9	10.24	
N 110 S 146 WP	6.25	10.15	2.15	s 9.08	897.8	38.9	s 10.17	
61 P	6.35	10.25	2.25	9.18	902.9	33.8	10.05	
70 P	6.45	10.33	2.33	9.25	907.7	29.0	10.00	
68 P	6.55	10.41	2.41	9.32	912.5	24.2	9.54	
Yard Limits 88 WP	7.07	10.52	2.52	s 9.48	918.8	17.9	s 9.45	
61 P	7.16	11.01	3.01	9.55	923.7	13.0	9.32	
68 P	7.24	11.09	3.09	10.02	928.4	8.3	9.26	
74 P	7.32	11.17	3.17	s 10.12	933.1	3.6	s 9.19	
N 100 S 88 WOIYP	7.40 PM	11.25 AM	3.25 AM	f 10.20 AM	936.7	0.0	9.10 PM	
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily			Leave Daily	
	(3.10) 25.58	(3.05) 26.27	(3.05) 26.27	(1.20) 34.71			(2.10) 37.38	

EASTWARD				Distance from San Francisco	Time Table No. 116 July 8, 1945	Distance from Christmas	WESTWARD	
SECOND CLASS			FIRST CLASS				FIRST CLASS	
856	854	852	6				5	
Freight	Freight	Freight	Argonaut	Argonaut				
Leave Daily	Leave Daily	Leave Daily	Leave Daily	Arrive Daily				
81 P				923.6		86.9		
72 P				927.0	TO	83.5		
26				932.0		78.5		
9				935.6		74.9		
18 P				938.1		72.4		
54 P				941.6		68.9		
45 P				949.8		60.7		
27 WP				959.0	TO	51.5		
26 P				969.0		41.5		
26 P				975.2		35.3		
23 P				983.1		27.4		
Yd. Limits P				987.8	TO-R	22.7		
29				994.9		15.6		
Yard Limits 2 BKWO YP				999.7		10.8		
14 P				1000.2	TO-R	10.3		
41				1002.1	TO	8.4		
				1010.5		0.0		

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Seco..... (Spur)	921.0	13

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Wooley..... (Spur)	984.6	5
Winkelman.....	1003.5	8

At Hayden Jct. when train-order office is open, signal governs movement of trains and engines between Christmas Branch junction switch (1584 feet east of Hayden Jct.) and Hayden Jct. train-order office. Movements between these points are authorized by signal being placed in proceed position after being called for by one long, one short and one long sound of whistle. When train-order office is closed, movements may be made between these points "With Caution" if intervening track is seen to be clear.

Normal position Christmas Branch junction switch is for Kennecott Copper Corporation Railroad. Westward trains and engines via Kennecott Copper Corporation Railroad, and via Christmas Branch, must stop to clear Christmas Branch junction switch before proceeding as authorized above.

Kennecott Copper Corp'n R. R. between Hayden Jct. and Hayden Mills is operated by the Tucson Division.

Speed of trains must not exceed 15 MPH.  
Grade Hayden Mills to Hayden Jct. 2.2%.  
Impaired overhead and side clearance at Hayden Mills Smelter.

RULE 99 must be complied with between Christmas Branch junction switch and Ray Consolidated derrick on Kennecott Copper Corporation Railroad.

Between Price and Christmas: Look out for rocks and landslides.



**EASTWARD**

**BOWIE SUBDIVISION**

**WESTWARD**

Capacity sidings in car lengths	EASTWARD													Distance from San Francisco	Time Table No. 116 July 8, 1945		Distance from Lordsburg	WESTWARD		
	SECOND CLASS						FIRST CLASS						FIRST CLASS							
	866 Freight	964 Freight	864 Freight	962 Freight	862 Freight	960 Freight	376	4 Golden State Limited	6 Argonaut	370	44 Californian	2 Sunset Limited	43 Californian		1 Sunset Limited					
Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Arrive Daily	Arrive Daily				
Tucson yard BKWCO ITYP	5.45 PM	4.05 PM	8.40 AM	7.45 AM	2.00 AM	12.01 AM	11.00 PM	12.15 PM	12.05 PM	11.30 AM	10.15 AM	1.50 AM	983.9							
63 P	6.13	4.40	9.08	8.20	2.28	12.35	11.20	12.35	12.25	11.50 AM	10.35	2.12	983.8							
63 P	6.35	5.05	9.30	8.45	2.50	1.00	11.37	12.52	f 12.42	12.07 PM	10.52	2.28	1003.3							
79 WP	6.57	5.40	9.52	9.29	3.12	1.35	11.54 PM	1.09	f 12.59	12.24	11.09	2.46	1012.6							
N94 S85 CIYP	7.30	6.20 PM	10.25	10.01 AM	3.45	2.15 AM	12.15 AM	1.30 PM	f 1.20	12.45 PM	11.30 AM	3.03	1023.6							
77 P	7.40		10.35		3.55				1.25			3.10	1028.2							
E118 Yd.Lmts. W70 BKWOP	8.00		10.55		4.15				s 1.41			s 3.25	1032.6							
62 P	8.12		11.07		4.27				1.48			3.32	1035.8							
83 P	8.23		11.18		4.38				1.55			3.38	1038.5							
75 WP	8.34		11.29		4.49				2.03			3.45	1041.0							
63 P	8.43		11.38		4.58				2.09			3.51	1043.9							
63 P	8.52		11.47		5.07				2.16			3.57	1047.3							
65 P	9.01		11.56 AM		5.16				2.23			4.04	1050.8							
E65 W65 YP	9.14		12.09 PM		5.29				s 2.31			4.11	1053.9							
81 P	9.24		12.19		5.39				2.37			4.17	1058.3							
90 P	9.33		12.28		5.48				s 2.46			4.22	1063.9							
64 P	9.42		12.37		5.57				2.53			4.28	1069.6							
68 WP	9.51		12.46		6.06				s 3.04			f 4.37	1074.7							
61 P	10.01		12.56		6.16				3.11			4.44	1079.4							
99 P	10.13		1.08		6.28				3.17			4.50	1082.6							
64 P	10.22		1.17		6.37				3.25			4.56	1087.7							
64 P	10.28		1.23		6.43				3.30			5.00	1091.0							
63 P	10.34		1.29		6.49				3.35			5.04	1094.5							
E110 Yd.Lmts. W113 BKWCOYP	10.55		1.50		7.10				s 3.58			s 5.15	1098.4							
64 P	11.04		1.59		7.19				4.05			5.22	1102.6							
63 P	11.11		2.06		7.26				4.10			5.27	1106.6							
63 P	11.18		2.13		7.33				4.15			5.31	1110.2							
BKWCO YP	11.25		2.20		7.40				s 4.20			5.36	1114.2							
64 P	11.45 PM		2.34		7.54				4.27			5.40	1117.6							
74 P	12.07 AM		2.46		8.06				4.33			5.45	1121.8							
70 P	12.30		2.55		8.15				4.39			5.51	1125.0							
E66 W69 YP	12.50		3.16		8.35				f 4.51			5.59	1128.9							
62 P	1.00		3.22		8.42				4.56			6.04	1132.7							
63 P	1.07		3.32		8.49				5.01			6.08	1136.5							
62 P	1.15		3.40		8.57				f 5.07			6.13	1140.8							
63 P	1.22		3.45		9.04				5.12			6.17	1143.9							
Yard Limits BKWCOYP	1.35 AM		3.55 PM		9.15 AM				s 5.20 PM			s 6.27 AM	1148.3							
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily								
	(7.50) 20.98	(2.15) 17.65	(7.15) 22.68	(2.16) 17.51	(7.15) 22.68	(2.14) 17.77	(1.15) 31.76	(1.15) 31.76	(5.15) 31.31	(1.15) 31.76	(1.15) 31.76	(4.37) 35.61								

**STATIONS**

TO-R TUCSON  
E. 0.8 - W. 0.8  
T. & N. R. R. JCT.  
E. 8.7 - W. 9.4  
RANKIN  
E. 9.4 - W. 9.4  
VAIL  
E. 9.2 - W. 9.3  
PANTANO  
E. 11.0 - W. 11.1

TO-R MESCAL  
E. 4.8 - W. 4.7  
CHAMISO  
E. 4.4 - W. 4.9  
BENSON  
E. 3.4 - W. 2.7  
FENNER  
E. 2.5 - W. 2.6  
CURVO  
E. 2.7 - W. 2.6

TO SIBYL  
E. 2.9 - W. 2.8  
TULLY  
E. 3.3 - W. 3.3  
OCHOA  
E. 3.8 - W. 3.8  
LANCHA  
E. 2.9 - W. 2.9  
DRAGON  
E. 4.5 - W. 4.7  
MANZORO  
E. 5.2 - W. 5.3  
COCHISE  
E. 5.9 - W. 5.7  
HADO  
E. 5.1 - W. 5.2

TO WILLCOX  
E. 4.7 - W. 4.6  
DRURY  
E. 2.9 - W. 3.2  
RASO  
E. 5.3 - W. 4.9  
ALRICH  
E. 3.6 - W. 3.6  
LUZENA  
E. 3.4 - W. 3.5  
CHOLLA  
E. 3.2 - W. 4.8

TO-R BOWIE  
E. 4.9 - W. 3.3  
HOLT  
E. 4.1 - W. 4.1  
OLGA  
E. 3.5 - W. 3.5  
KARRO  
E. 3.7 - W. 3.7  
SAN SIMON  
E. 3.6 - W. 3.6  
BAWTRY  
E. 4.4 - W. 4.4  
VANAR  
E. 3.1 - W. 3.2  
CAVOT  
E. 3.7 - W. 3.7

TO STEINS  
E. 3.8 - W. 3.8  
MONDEL  
E. 4.1 - W. 4.1  
CONRAD  
E. 4.3 - W. 4.3  
GARY  
E. 3.1 - W. 3.1  
PYRA  
E. 4.6 - W. 4.0

TO-R LORDSBURG

(164.4)

Time over District  
Average Speed per Hour

Be Governed by Current Time Table and Bulletins of Rio Grande Division.

Westward trains will use track No. 1, Rio Grande Division, Mescal to Tucson, and eastward trains will use track No. 2, Tucson Division, Tucson to Mescal, under double track rules.

**ADDITIONAL STATIONS**

NAME	Mile Post	Capacity
Polvo..... (Spur)	987.7	4
Wilmot.....	990.7	13
Esmond.....	998.6	..

**ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE PASSENGERS**

Train	At	Receive or Discharge	To (or beyond)	From (or beyond)
1	Wilcox, Cochise	Discharge		East of El Paso

# SPECIAL INSTRUCTIONS



### RULE 2. Watch Inspectors:

S. A. Pope, Manager of Time Service....	.65 Market St., San Francisco
Yuma.....	J. H. Huber
Phoenix.....	H. H. Howard
Tucson.....	Grunewald & Adams
Tucson.....	R. W. Hemkin
Nogales.....	G. C. Jackson
Lordsburg.....	E. L. Preis
Globe.....	J. G. Cubitto
Miami.....	J. G. Cubitto, Jr.

RULE 2 (A). Watches subject to inspection must be presented to a designated inspector for comparison, and certification on standard watch certificate between the first and fifteenth of each month.

RULES 10 (G) and 10 (H). On tracks No. 1 and No. 2 between Tucson and Polvo, signals will be placed on left of track in direction of movement.

RULE 10 (H). Where yellow signals are displayed within limits of a length of track over which a maximum speed is designated in train order or time-table bulletin and no maximum speed is otherwise specified for the particular section of track protected by these yellow signals, trains must not exceed fifteen miles per hour thereover.

RULE 10 (J). Mile Post location of slow boards which restrict the speed of trains, as indicated on slow board, while engine of such train is passing distant signal three-fourths mile beyond the slow board:

Eastward			Westward		
<b>YUMA-PHOENIX</b>					
779.3	847.6	873.9	754.7	832.9	877.4
791.4	849.5	879.9	782.8	852.8	883.4
800.7	859.5	888.2	804.2	862.9	891.5
810.9	864.0	891.2	814.4	867.4	894.8
820.6	869.9	896.3	824.1	873.4	899.8
829.4					
<b>PHOENIX-PICACHO</b>					
909.9	937.2	960.3	912.5	936.2	963.8
927.7	941.2	969.6	931.2	940.6	967.9
932.7	957.8			960.2	973.0
<b>PICACHO-TUCSON</b>					
939.0	946.0	979.7	964.3	968.9	976.6
942.1	972.8				982.1
<b>WELLTON-GILA</b>					
791.1	814.1	838.7	772.2	817.7	834.8
	818.1	844.1	797.6	821.3	847.1
799.1	827.9	848.7		823.7	851.7
804.7	831.8	853.7	808.2	831.3	
<b>GILA-PICACHO</b>					
853.7	877.8	905.9	858.2	881.2	904.6
857.2	881.8	911.0	866.9	885.2	909.3
863.6	890.9	916.8	870.5	889.9	914.3
870.2	895.7	922.0	873.4	894.3	920.4
873.1	901.2	926.7	876.4	899.8	925.3
					930.1
<b>TUCSON-LORDSBURG</b>					
1001.7	1068.0	1135.2	1004.7	1052.4	1126.7
1026.9	1077.9	1139.5	1013.9	1055.3	1130.2
1042.4	1115.9	1142.6	1034.7	1060.0	1134.0
1052.4	1131.1		1037.4	1071.0	1138.1
			1042.6	1092.8	1142.5
					1145.5

Mile Post location of slow board which restricts the speed of trains, as indicated on slow board, while engine of such train is passing the home signal three-fourths mile beyond the slow board:

Eastward		Westward	
1024.4	1070.5		

Slow boards for westward trains at MP 922.82, MP 1041.5 and MP 1045.9 also have lamp attached which displays yellow light at night. This light is to call attention to slow board, and is not a yellow signal referred to in Rule 10 (H).

RULE 14. Other engine whistle signals:  
For diverging route, 0 \_\_\_\_\_ 0.  
For siding, \_\_\_\_\_ 0 \_\_\_\_\_.

RULE 14 (d). As specified below, \_\_\_\_\_ 0 sounds of whistle will be indication that flagman may return from west as prescribed by Rule 99:

- Phoenix Yard—Kendall, Trains on Second Main Track.
- Normal Jct., Trains on Creamery Branch.
- Picacho, Trains on Phoenix Line.

RULE 14 (e): As specified below, \_\_\_\_\_ sounds of whistle will be indication that flagman may return from east as prescribed by Rule 99:

- Wellton, Trains on Phoenix Line.
- Litchfield, Trains on Litchfield Branch.
- Kendall—Phoenix Yard, Trains on Second Main Track.
- Tempe, Trains on Creamery Branch.
- Tempe Jct., Trains on Tempe Branch.
- McQueen, Trains on Christmas Branch.
- T. & N. R. R. Jct., Trains on Nogales Branch.
- Mescal, Trains on Rio Grande Division.
- Bowie, Trains on Globe Branch.

RULE 17. Mars Signal Light on engines shall be used when engine is moving at night, and in foggy or stormy weather. It must be dimmed or extinguished approaching passenger stations, and at other points as prescribed by rules.

RULE 21 (C). At Phoenix, Gila and Tucson, incoming engines may display indicators until arrival at roundhouse.

RULE 28. In double track territory signals will be placed to right of track according to direction of movement of train to be flagged. Trains in opposite direction will not be required to observe signals so placed.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except as shown on Pages 3 and 6.

RULE 83. Identification may be made on double track between Yuma and East Yard; Dome and Wellton; Stockham and Tucson; Phoenix and Phoenix Yard; to be applied at end of double track; and on second main track between Phoenix Yard and Kendall, to be applied at Kendall. Reduce speed sufficiently to permit identification and Rule 14 (k) will apply.

RULE 83 (A). At the following stations, only trains indicated will register:  
East Yard—Westward trains entering yard tracks.  
Phoenix—First-class trains.

RULE 83 (B). At open train-order offices trains may register by ticket as follows:  
East Yard..... Westward trains entering yard tracks.  
Phoenix Yard..... First-class trains  
Mescal..... All trains  
Bowie..... All trains except on Globe Branch  
Tucson—Engineers of light engines from east will leave register ticket with engine dispatcher for delivery to operator for registration.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
731.51	Yuma.....	737.83
	“ (Yuma Valley R. R.).....	0.22
900.96	Phoenix.....	908.79
920.45	Mesa.....	922.88
981.96	Tucson (Track No. 2).....	989.00
	“ (Track No. 1—Rio Grande Div.).....	988.09
	“ (Nogales Br.).....	987.42
1021.24	Mescal (R. G. Div.).....	1023.13
1022.89	“ (Tucson Div.).....	1024.13
854.20	Gila.....	857.70
917.78	Casa Grande.....	920.05
986.84	Ray Jct.....	988.72
998.80	Hayden Jct.....	1004.90
1046.37	Nogales.....	1049.89
1031.60	Benson.....	1034.01
1097.10	Bowie.....	1100.00
	“ (Globe Br.).....	1099.50
1136.65	Safford.....	1138.34
1218.70	Globe.....	1223.22
1229.82	Miami.....	1234.20
1147.19	Lordsburg.....	1151.38

RULE 97. Extra trains must not run via Creamery Branch unless train order so specifies.

RULE D-97 (A). Will apply between Phoenix and Phoenix Yard.

RULE 99. First-class trains must move with caution on passenger tracks at Phoenix, and passenger tracks 1, 2 and 3 at Tucson, and trains standing on these tracks need not protect against following first-class trains, but must comply with Rule 99 (A).

RULE 99 (C). Will apply as follows:  
Globe Branch between Bowie and Globe; 1  
Christmas Branch between McQueen and Hayden Jct.

RULE 103 (A). A flagman must precede all movements over:  
Yuma, 1st, 2nd, 3rd and 4th Sts.  
Tovrea, Washington St.  
Tempe (Creamery Branch), Mill Ave. and 8th St.  
Dateland, U. S. Highway 80.  
Naviska, U. S. Highway 84.  
Tucson, West Congress St.,  
“ South 6th Ave.,  
“ Simpson St.

Nogales, Court and Park Sts.  
Globe, Hackney St. and eastward over Murphy St.  
Miami, Latham Blvd., Adonis Ave. and Miami Copper Co. highway crossing.

RULE 103 (B). Back-up hose must be used when making back-up movements with cars, between Hayden Jct. and Hayden Mills, and between North and South yards and/or P. F. E. yard, Tucson.

Back-up hose must be used on leading car when shoving cars on Government tracks at Airports at Yuma, Naviska, Higley and Wilmot.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

- Phoenix..... West end double track, for westward track.
  - Kendall..... Second main track, for first main track.
  - Picacho..... Phoenix line, for Gila line. Operators will handle switches to and from Phoenix line, also for movements through crossovers, and west switches of north and south sidings.
  - Litchfield..... Litchfield Br., for Phoenix line.
  - Yuma..... Yard track on Madison Ave., for YVRR main track.
  - Magma..... Magma-Arizona RR main track, for back track.
  - McQueen..... Christmas Br., for Phoenix line.
  - Ray Jct..... KCCRR main track, for yard track.
  - Hayden Jct..... Christmas line, for KCCRR line.
  - Tucson..... Nogales Br., via Shop Yard, for Track No. 1.
  - Tempe..... Creamery Br., for Phoenix line.
  - Normal Jct..... Creamery Br., for Phoenix line.
  - Tempe Jct..... Tempe Br., for Phoenix line.
  - Bowie..... Globe Br., for Eastward siding.
  - T&NRR Jct..... T&NRR wye track, for Track No. 1.
  - Benson..... Benson-Fairbank Br., for helper lead.
- Normal position of west crossover switch from yard track 1 to eastward main track at East Yard, is for tail track.

### DERAILS IN MAIN TRACK:

- Litchfield Park, 320 feet west of east end of track.
- Christmas, 250 feet east of west switch.
- Nogales, 221 feet west of west switch, may be trailed through by eastward trains.

RULE 105. Following tracks are designated for use as sidings:

- Fowler..... Track north of main track.
- Mesa..... Track south of main track.
- Red Rock..... Track north of main track, for eastward trains; Track south of main track, for westward trains.
- Jaynes..... Track north of main track, for westward trains; Track south of main track, for eastward trains.
- Mohawk..... First track north of main track, for eastward trains; Second track north of main track, for westward trains, and connects with eastward siding at each end.
- Aztec..... Track north of main track, for westward trains; Track south of main track, for eastward trains.
- Sentinel..... Track north of main track, for eastward trains; Track south of main track, for westward trains.
- San Carlos..... Track north of main track, opposite station.
- Benson..... Track north of main track, for eastward trains; Track south of main track, for westward trains.
- Dragoon..... Track north of main track, for westward trains; Track south of main track, for eastward trains.



Bowie.....Track north of main track from west switch to main track switch just east of station building, for eastward trains; Track north of main track from east switch to main track switch just east of station building, for westward trains.

Steins.....First track north of main track, for westward trains; Second track north of main track, for eastward trains, and connects with westward siding at each end.

Abbreviations used for sidings: "E" for Eastward, "W" for Westward, "M" for Middle, "N" for North, "S" for South. Sidings designated as Middle, North or South, may be used by trains in either direction.

RULE 221. First sentence of third paragraph is amended as follows: "When a train order is to be delivered to an approaching train, or orders are held for any other train in the same direction, except those originating, the operator must not clear the signal."

Trains must obtain clearance before leaving Tempe to or from Creamery Branch, and at Bowie and Miami and at Phoenix Yard, except westward trains terminating at Phoenix.

Phoenix is train-order office for first-class trains only.

RULE D-251. Applies to the following tracks:

Westward track, East Yard to Yuma. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving East Yard, before passing Signal 7341, and before passing Signal 7331.

Both tracks between Phoenix and Phoenix Yard.

Track No. 1 and westward track from PFE yard Tucson, to Stockham. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving PFE yard, and before passing Park Ave., Signal 9843, and Sixth Ave., but this does not authorize trains or engines to pass Signal 9853 indicating "stop."

RULE 297. Following paragraph is added:

A train, if delayed in the block, must proceed with caution to the next signal.

METHOD OF DISPATCHING TRAINS BETWEEN TUCSON AND MESCAL

Track No. 1 Mescal subdivision and Track No. 2 Bowie subdivision will be operated under double track rules, Track No. 1 westward track and Track No. 2 eastward track.

Limits of double track operation between Tucson and Mescal will be as follows:

Eastward—via Track No. 2 to switch of west end crossover between Tracks No. 2 and No. 1 at Mescal.

Westward—via west end crossover between Tracks No. 2 and No. 1 at Mescal and Track No. 1 from west switch of crossover to Tucson.

RULE D-97 (A) will apply on Tracks No. 1 and No. 2 between Tucson and Mescal, except that extra trains must obtain clearance, or proper train-order signal, or permission from train dispatcher before using either track.

Trains from Bowie Subdivision moving to Mescal Subdivision, and trains on Mescal Subdivision moving through Mescal, with the same conductor and engineer operating through Mescal, may be issued train orders on one subdivision that affect their movements on either, or both subdivisions. Any such train orders issued by one division to a train on the other division must be transmitted to the other division addressed to Dispatcher before complete is given to the order addressed to the train; and such orders must be shown on clearance issued by the division on which train originates.

RULE 82 (A). Regular trains and sections of schedules authorized on Bowie or Mescal Subdivisions are authorized to assume corresponding schedules or sections of schedules on Bowie or Mescal Subdivisions at Mescal without clearance.

Westward trains may leave Mescal without clearance provided train is properly cleared by train-order signal.

RULE 83 (B). When a regular train is checked on Bowie or Mescal Subdivision, it will not be necessary to check the register at Mescal against the same train.

RULE 505. AUTOMATIC BLOCK SYSTEM

Yuma: Eastward freight trains must not pass Signal 7328, and westward trains, except first-class, must not pass Signal 7341 unless proceed signal received from yardman (white flag by day, green light by night).

East Yard: Westward trains entering yard tracks must not pass Signal P-7375 unless proceed signal received from yardman (white flag by day, green light by night).

Phoenix: Crossing—AT&SF Wye: If signal indicates "stop" trains and engines must stop, and if wye is clear of intersecting movement, may then proceed as prescribed by Rules 509(F) or 509(J), but must provide flag protection on intersecting track unless derail is known to be in derauling position.

Phoenix: Main track has no block signal protection between Signal 9059.5 and a point on eastward and westward track opposite Signal 9064. Passenger tracks have no signal protection.

Picacho: Upper unit in Signal 9377 governs movement on main track; Middle unit for north siding; Lower unit for south siding. Signal 9374 will require a two-minute interval to clear after switch on north siding is lined for movement to main track if it is desired to make an eastward movement from north siding ahead of eastward train on main track or eastward train occupying approach circuit on south siding.

Tucson: Passenger tracks 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on Track No. 2 have no block signal control.

Westward trains must not pass east crossover switch opposite Signal 9838, just east of Tucson yard office without proceed signal from yardman, (white flag by day, green light by night) unless this switch is lined for movement on Passenger track 1.

Trains and engines finding Signal 9843 indicating "stop" may proceed into passenger tracks 2 or 3 if switches are properly lined and proceed signal from yardman (white flag by day, green light by night) is received, but must move with caution, not exceeding 12 MPH.

Westward freight trains must receive proceed signal from yardman (white flag by day, green light by night) before passing Signal 9875, and at first crossover switch west of Signal 9851.

Eastward freight trains, after passing Sixth Ave. tower, and before entering freight yard, must receive proceed signal from yardman (white flag by day, green light by night).

Tucson-Mescal: Eastward trains on Track No. 2 finding a signal indicating "stop" will apply Rule 509(i). Westward trains moving against current of traffic on Track No. 2 finding a signal indicating "stop" between Mescal and Esmond will apply Rule 509(J); and will have no block signal protection between Esmond and Tucson. Between Tucson and Polvo, automatic signals are on the left of the track in current of traffic direction.

PUSH BUTTONS

Push button and light on side of relay case on Signals P-9376 and P-9378 at Picacho; P-9776 and P-9778 at Jaynes; and P-11245 and P-11247 at Cavot. If practicable, Approach Circuit sign on siding should not be placed if train on main track is to proceed first. When train on main track or siding is to let train on other track proceed first, signal on other track should be cleared by pressing push-button bearing number of the signal on other track until light on relay case appears. Time release will then operate, and requires from two to five minutes for signal to clear. Instructions for operating push buttons are posted on inside of push-button box.

RULE 510. The following block signals equipped with triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Table with 3 columns: Direction (Eastward/Westward), Signal Number, and Protection/Location. Lists various signals and their corresponding protection locations like 'Spring switch, end double track, East Yard'.

RULE 516: Overlap posts:

Table listing overlap posts for various locations: 23rd Ave. Phoenix, McQueen, Papago, Cortaro, Pembroke, Mondel. Columns include location, siding position, and train direction.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows, and speed indicated must not be exceeded while trailing through the switches:

Table with 4 columns: LOCATION, NORMAL POSITION, Psg. Frt., MPH. Lists locations like Yuma, East Yard, Dome, Pembroke, Kim, Picacho, Ocatilla, Wymola, Red Rock, Naviska, Rillito, Cortaro, Jaynes, Stockham, Chamiso, Curvo, Sibyl, Cavot, Mondel.

A spring switch with facing point lock must not be trailed through unless switch target displays the letters "SS" in normal position, or switch has been lined for the movement.

Spring switches not equipped with facing point locks are located as follows, and speed indicated must not be exceeded while passing over the switches in facing movement, or in trailing through them:

Table with 4 columns: LOCATION, NORMAL POSITION, Psg. Frt., MPH. Lists Phoenix and Phoenix Yard locations.

Spring switches are also located on engine lead at Yuma; engine leads at Tucson; on PFE leads in PFE yard, Tucson; and on stem of wye at Estrella, Dragoon, San Simon and Steins, and in main track at Nogales 221 feet west of west switch.

Switch position indicator at spring switch on engine lead, Yuma indicates position of switch points, and does not indicate track occupancy. When indicator displays red aspect careful examination of switch must be made before passing over switch.

RULE 605. INTERLOCKING

All trains must move through interlocking limits with caution. Wellton: Limits extend from interlocking signals 4,000 feet east of station building on Gila line and on Phoenix line, to interlocking signals 400 feet west of station building on westward track and 1,000 feet west of station building on eastward track.

The derail at east end of siding is electrically locked, and can be operated by trainmen only when released by signal operator.

Switches and derrails to spurs leading from westward main track, just west and east of station building are hand-thrown, but must not be used until permission is secured from signal operator.

Picacho: Limits extend from Signal 9366SA on Gila Line and Signal 9796SA on Phoenix line, to Signal 9369SA on Wymola line, Signal 9801SA on north siding, and Signal 9367SA on south siding. North and south sidings are in automatic block system.

Tucson, Sixth Ave.: Limits extend from point opposite Signal 9835 on both main tracks, to end of double track, and on passenger track 1 to dwarf signal 7 feet west of west switch of passenger track 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower. Signals prescribed by Rule 628 may be given from tower window.

Whistle signals: Eastward passenger trains approaching tower o o; Eastward freight trains approaching tower o o; Independent Ice lead to westward track.

SPECIAL INSTRUCTIONS

Mescal: Interlocking signals of Rio Grande Division will display indication in the upper quadrant. Signal arm extending upward parallel to signal mast indicates "proceed".

Limits are between home signals at east switch of east crossover and west switch of west crossover on Rio Grande Division, and home signals at east and west ends of north and south sidings on Tucson Division. Switches are under control of signal operator, except switches leading from north siding to water and outfit spurs; from south siding to both legs of wye, and to west end of coal track. Switch and derail east end coal track are hand-thrown, but must not be used until permission is secured from signal operator. North and south sidings have no signal control between Interlocking Limit signs.

Where hand signals, as prescribed by Rule 628, cannot be seen, trains stopped will call the signal operator and secure permission to proceed; also to throw switches by hand in event the remote control appliance is inoperative.

Whistle signals:

- Eastward trains to Tucson Division o o ——— o o
Eastward trains to Rio Grande Division ——— o o o o
Eastward trains to south siding o ——— o
Eastward trains south siding to Tucson Division o o ——— o
Eastward trains south siding to Rio Grande Division o ——— o o
Westward trains north siding to Track No. 1 ——— o o
Westward trains Tucson Division to Track No. 1 o ———
Westward trains Tucson Division to north siding o o ———
Westward trains Rio Grande Division to Track No. 1 ——— o ———
Westward trains from Rio Grande Division through east crossover and Tucson Division to Track No. 1 o ——— o

TAKE-SIDING INDICATOR

RULE 705. Picacho: When letter "S" is displayed, the letter "N" or "S" will also be displayed. When the letter "N" is displayed in conjunction with the letter "S," westward trains will use north siding. When the letter "S" is displayed in conjunction with the letter "S," westward trains will use south siding. This indicator located on Signal 9385.

RULE 740. ABSOLUTE-PERMISSIVE BLOCK SYSTEM YUMA-COLORADO

Limits extend from absolute signals west of Colorado River bridge to absolute signals east of Colorado River bridge. Speed must not exceed 6 MPH until engine has passed spring switch at opposite end of bridge. Trains stopped by absolute signal west of bridge must obtain permission from yardmaster, and also make inspection of spring switches at each end of bridge before proceeding.

RULE 824. Instructions for setting hand brakes:

- Yuma: Freight trains.....Four brakes on east end, Two brakes on west end.
East Yard: Freight trains.....Two brakes on east end, Five brakes on west end.
Phoenix Yard: Freight trains.....Two brakes on west end, Two brakes on east end.
Tucson: Passenger trains.....Two brakes on west end, Two brakes on east end.
Freight trains.....Fifteen brakes on west end, Ten brakes on east end.
Tucson, PFE Yard: Freight trains.....Fifteen brakes on west end, Ten brakes on east end.

At Tucson hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

At points where hand brakes must be set on freight trains such brakes must be securely set, using standard brake club to set staff brakes, after train or cut has stopped, unless yardmen immediately take charge and yard engine is coupled to cars. Any employe releasing any of these brakes must set as many others to replace them.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movement on descending grades must be protected by a derail. When practicable engine must be kept on descending grade end of cars.

RULE 837. Fifth paragraph is revised to read as follows: Cars standing on grade must not be coupled onto, in descending direction, without knowing sufficient hand brakes are set to prevent uncontrolled movement of any such cars should coupling fail or cars not be securely coupled together.

RULE 849. Steam valve on Pullman troop sleepers cannot be opened while train is in motion, and when such car is on rear of train steam line must not be cut in any portion of train until valve is closed on the car on each side of coupling to be opened, to avoid burning by steam.

RULE 827. TRAIN INSPECTION

Engines running light on descending grades must stop for inspection at freight train inspection points.

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles, except freight trains and light engines may run between Tucson and Maricopa, and between Aztec and Yuma, for inspection. This does not relieve trainmen, however, from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer. On branch lines distance of 40 miles must not be exceeded, and on descending grade must stop at Cutter.

Trains, including military trains, made up in part of freight cars or cabooses equipped with cast iron wheels are required to comply with rules and time-table instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

Cars bearing placards denoting contents are explosive, inflammable, poisonous or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

AIR BRAKE RULES

RULE 17. Retainers will be used on grades of 1.4% to 1.5% on freight trains of less than 110 M's per operative brake when necessary in the judgment of conductor and engineer.

On freight trains averaging 110 M's and over on grades of 1.4% to 1.5% and on all freight trains on grades of 1.5% and over, retainers will be used as follows:

Table with 2 columns: Location (Mescal to Benson, Steins to Mondel, etc.) and Retainer requirements (1.4% grade, One Retainer for each 150 M's, etc.)

When retainers are used, stops will be made for inspection and to permit heat of wheels to equalize, as follows:

- Eastward: Chamiso
Westward: Fenner
Vanar

FREIGHT TRAINS

RULE 25. Freight trains may pass

- Mescal, Eastward
Estrella, Dragoon and Steins, Westward
Pinal, Eastward and Westward

without stopping for purpose of rear end air test if proceed signal is given from rear by trainmen, after complying with Air Brake Rule 4, and air gage indicates required air brake pressure. Speed approaching summit must not exceed 15 MPH.

If proceed signal is not given or received, train must stop and rear end air test be made.

PASSENGER TRAINS

RULE 39.—Running air-brake test not required of eastward passenger trains approaching Crossing—AT&SF Wye.

Incoming passenger enginemen will leave automatic air brakes set on trains at Tucson, Phoenix and Yuma after final stop has been made.

Outgoing enginemen will release brakes on signal from carmen, this signal to be given only after all switching has been done.

MISCELLANEOUS

1. Wellton, Aztec, Sentinel, Gila, Casa Grande, Florence, Hayden Jct., Benson, and San Simon, water for engine purposes is treated and must not be taken for domestic use except as follows:

- Aztec, water rack, or by closing valve between treater and water column.
Sentinel, water rack and east water column.
Hayden Jct., by closing valve between treater and water column.
Benson, either of the two columns at station, by first opening switch in box on outside of freight house.

When filling water cars for domestic purposes at Hayden Jct. and Benson, after closing valve between treater and water column, fill engine tank to drain line of treated water before filling water cars.

Aztec, westward freight trains take water when possible and take water at Sentinel only when it will avoid delay west of there.

Sentinel, eastward freight trains take water and fill water car, and take water at Aztec only when necessary or when it will avoid delay at Sentinel.

Saddle, emergency water station, take only enough water to reach next water station.

Maricopa, eastward and westward freight trains take water, and if necessary, fill water car.

Benson, when business is heavy, westward freight trains and light engines take water at columns at station, to avoid shortage in east tank.

Sibyl, westward identified and other important freight trains may take water if it will avoid stopping at Benson. Other freight trains and light engines will not take water except in case of emergency, and then only sufficient to reach Benson.

In all cases where it is necessary to make a short move with heavy freight train to reach water or oil column, including that required to spot second engine of double-headed train, engine must be cut off before spotting at column.

4. Helper service:

No helper engine will be placed behind wooden underframe cars or cabooses.

Engines weighing more than 235,000 pounds on drivers will not be placed behind steel underframe cabooses.

In no case will more than one helper engine be placed behind steel underframe cabooses.

One helper may be placed on head end, but not more than two engines will be used on head end of any freight train. When additional helpers are required, they will be placed back in train and cut in ahead of any cars of wooden frame construction.

When one Diesel helper is used it will be placed on head end; when two Diesel helpers are used, one will be placed on head end and one on rear end; when one Diesel and one steam engine are used as helpers the Diesel will be placed on head end and steam engine helper on the rear.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

When used as helpers in rear of train, AC, AM or MM class engines must not be coupled together, nor may more than two F, Mt, or heavier class, or more than three smaller classes be coupled together. When coupled, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades road engine and helper must not be cut off from train at the same time without hand brakes being securely set.

4 (a). For the purpose of pushing trains out of yards:

No engine will be placed behind wooden underframe caboose or other wooden frame equipment.

Engines weighing more than 235,000 pounds on the drivers will not be placed behind steel underframe cabooses.

Air will not be coupled through pusher engine.

Yard engines regularly so used will be equipped with Russell-Jordan device to hold the coupler pin from dropping, thus making it unnecessary for employes to uncouple the pusher engine when cutting off.

In no case shall the knuckle be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

5. Litchfield, gate at entrance Airplane spur is locked with Government lock, and to gain entrance it will be necessary for engineer to sound a long and short blast of steam whistle and the watchman on duty will take care of the opening and closing of the gate.

Litchfield Park, Boswell spur is protected by gate, which must be kept closed and locked when not in use.

Tovrea, entrance to Tovrea Packing Co. plant is protected by gates, which must be kept closed and locked when not in use. Look out for rubbish and material alongside tracks around plant.

Hayden, entrance to Kennecott Copper Corp's plant is protected by gate, which must be closed and locked at night.

Coolidge, gate at entrance to Indian Service spur must be kept closed and locked when not in use.

Tucson, PFE yard, look out for ice and rubbish alongside PFE tracks.

Willcox, look out for bedding sand between tracks 2 and 3.

7. Capacity of sidings between clearance points is based on an average car length of 49 feet not including engines and cabooses.

Figures between station names on schedule pages indicate distance from initial switch of siding at one station to initial switch of siding at next station. If no siding it is distance to point where time applies.



SPECIAL INSTRUCTIONS

MAXIMUM SPEED PERMITTED CERTAIN ENGINES, SUBJECT TO FURTHER RESTRICTIONS AS SHOWN IN SPEED RESTRICTIONS TABLE

Maximum speed for SP-1-2-3 not cross counter-balanced, C-15-17-32, Mk-10-11 and MM-3 class engines 35 MPH when handling Freight and Mixed Trains.

Maximum speed for S and SE class engines, 20 MPH, but must not exceed speed permitted Freight and Mixed Trains and Light Engines.

Maximum speed for Gas-electric cars running light forward, 50 MPH, but must not exceed speed permitted when handling Passenger Trains.

Engines backing must not exceed 20 MPH on all curves, and when approaching road crossings at grade.

Engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Engines with tenders having water capacity 7,000 gallons or less, except Classes 70-R-1 and 70-SC-1, must not exceed 50 MPH.

Diesel electric switch engines running forward, with train or light, may make maximum speed as shown below, except must not exceed speed permitted Freight and Mixed trains. These engines when backing may make speed shown below, except must not exceed speed permitted E class engines backing where such permitted speed is less than 30 MPH:

Table with 3 columns: Classification, Running Forward With Train Light, Running Backward With Train or Light. Rows include DES-200, DES-1 to 7 inc., DES-100 to 107 inc.

Maximum speed of engines under following conditions, running under own steam or hauled in train, must not exceed:

- When all weight has been removed from any one pair of drivers... 20 MPH
When all weight has been removed from only one wheel from any pair of drivers... 30 MPH
When engine truck is removed... 20 MPH
When main rod only is removed... 30 MPH
When side rod only is removed... 30 MPH
When both main and side rods are removed... 20 MPH
When hauled in train with all rods on... 30 MPH

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT

Table with 3 columns: PAGE, TYPE OF ENGINE-TERRITORY-STRUCTURE-LADING, ETC., MPH. Contains various conditions for maximum speed based on equipment and territory.

Maximum speed of deadhead equipment or passenger trains with standard caboose is 50 MPH between Tucson and Mescal.

Trains consisting of engine and caboose only are considered freight trains and speed restricted accordingly.

Passenger trains handling steel wheel box cars or foreign line steel wheel box cars equipped for movement in passenger trains, except those equipped with high speed trucks, must not exceed speed of 60 MPH.

Baggage and Express cars in Series 5800-5874 are not equipped with high speed trucks. Trains handling them must not exceed 60 MPH.

Wooden passenger-carrying cars, wooden baggage, express and other head end cars, unless equipped with steel center sills and steel platforms must not be used in passenger trains. Speed of trains handling such cars restricted to 40 MPH.

If consist of train includes both wooden and steel passenger-carrying cars, the wooden cars must be kept together and handled on rear.

SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or "fixed signal."

Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to Maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Main speed restriction table with columns for Page No., Territory, and various engine classes (P-8, E, T, AC-4-5, T-1-8-9-23-28, M, C-2-4-5-8-9, C-15-17-32, FREIGHT AND MIXED, LIGHT ENGINE RUNNING FORWARD, ENGINE BACKING WITH TRAIN OR LIGHT).

\*List of CCB (cross counter-balanced) engines:

- All P-8 class, except Eng. 2470;
F-1 class: 3611, 3612, 3615, 3616, 3619, 3620, 3625, 3634, 3636, 3638, 3643, 3647, 3652;
F-3 class: 3653, 3654, 3655, 3656, 3657, 3658, 3660, 3661, 3662, 3663, 3664, 3665, 3666;
F-4 class: 3668, 3670, 3671, 3672, 3674, 3676, 3677, 3678, 3681, 3682, 3683, 3684, 3685, 3686, 3687, 3688, 3692, 3695, 3696, 3697, 3701, 3702, 3704, 3705, 3706, 3707, 3709, 3711, 3715, 3716, 3717;
F-5 class: 3718, 3720, 3721, 3727, 3728, 3732, 3734, 3737, 3742, 3752, 3753, 3755, 3760, 3763, 3764, 3765, 3766, 3767, 3768, 3769;
AC-6 class: 4126, 4127, 4128, 4130, 4131, 4132, 4133, 4135, 4136, 4137, 4138, 4140, 4142, 4143, 4144, 4146, 4149, 4150;

- SP-1 class: 5001, 5002, 5003, 5006, 5008, 5009, 5011, 5012, 5013, 5014, 5015;
SP-2 class: 5016, 5017, 5018, 5019, 5020, 5021, 5022, 5023, 5024, 5025, 5026, 5027, 5028, 5029, 5031, 5032, 5033, 5034, 5035, 5038;
SP-3 class: 5039, 5040, 5041, 5042, 5043, 5044, 5045, 5047, 5048.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

Table with 2 columns: Description of track type, and Maximum Speed (MPH). Rows include Through sidings, yard and other side-tracks, crossovers, turnouts and slip-switches, etc.; On P.F.E. yard tracks 1 to 6 inc., Tucson; Through any crossover, turnout or slip-switch with engine backing.

SPECIAL INSTRUCTIONS

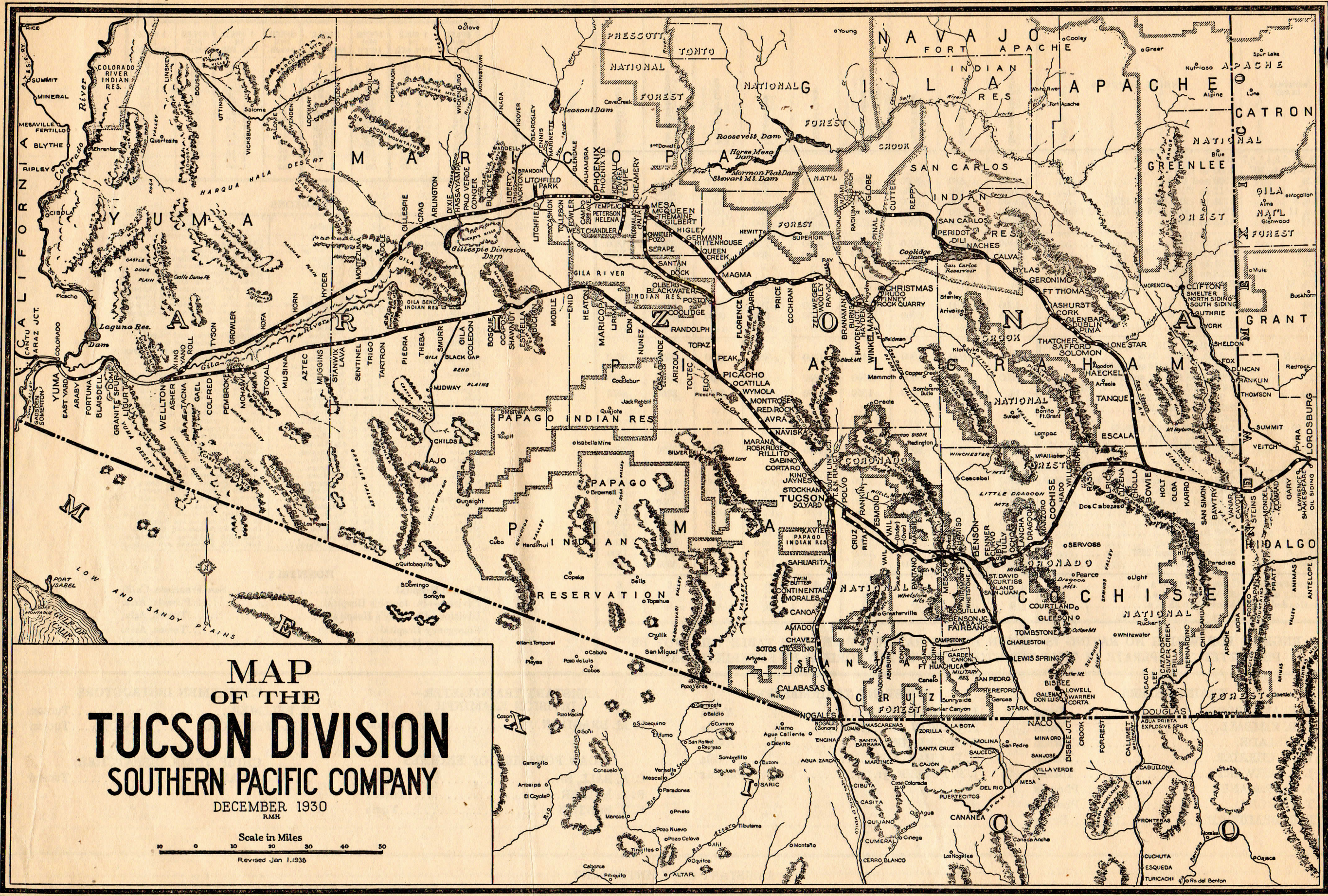
SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or "fixed signal."
Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to Maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Table with columns: Page No., TERRITORY, WITH TRAIN - LIGHT ENGINE RUNNING FORWARD (PASSENGER, FREIGHT AND MIXED), LIGHT ENGINE RUNNING FORWARD (E, T, M, C-2-4-5-8-9, C-15-17-32), ENGINE BACKING WITH TRAIN OR LIGHT (E, T, P, C, M, AC, MM, Gas-elec. cars).

Table with columns: Page No., TERRITORY, PASSENGER (Maximum, Gas-electric, M-4-6-9-11, T-37, C-8-9-10, Mk-2-4-5-6-7-8-9), FREIGHT (Freight and Mixed Maximum), LIGHT ENGINE RUNNING FORWARD (M, T-37, C-8-9-10, Mk-2-4), ENGINE BACKING WITH TRAIN OR LIGHT.







MAP  
OF THE  
**TUCSON DIVISION**  
SOUTHERN PACIFIC COMPANY

DECEMBER 1930  
RMH

